REMARKS

Claims 1-16 are canceled. Claims 17-49 are added. Claims 17-49 remain in the application. Reconsideration of the application in view of the amendments and the remarks to follow is requested.

Claims 4, 6, 7, 12, 14 and 15 are objected to as being dependent upon a rejected base claim.

Please note, new claim 20 includes all the limitations of objected to claim 4 (which includes dependent claim 3 and independent 1), and therefore, new claim 20 is allowable.

New claim 22 includes all the limitations of objected to claim 6 (which includes dependent claim 5 and independent 1), and therefore, new claim 22 is allowable.

New claim 23 includes all the limitations of objected to claim 7 (which includes dependent claim 5 and independent 1), and therefore, new claim 23 is allowable.

New claim 36 includes all the limitations of objected to claim 4 (which includes dependent claim 3 and independent 1), and therefore, new claim 36 is allowable.

New claim 37 includes all the limitations of objected to claim 6 (which includes dependent claim 5 and independent 1), and therefore, new claim 37 is allowable.

New claim 38 includes all the limitations of objected to claim 7 (which includes dependent claim 5 and independent 1), and therefore, new claim 38 is allowable.

Claims 1-3, 5, 8-11, 13 and 16 stand rejected under 35 U.S.C. §102(a) as being anticipated by Pla et al. (5,724,017), Calabro' et al. (6,633,107) or Baz (5,485,053).

Regarding anticipation rejections, the PTO and Federal Circuit provide that §102 anticipation requires that *each and every element* of the claimed invention be disclosed in a single prior art reference. *In re Spada*, 911 F.2d 705, 15 USPQ2d 1655 (Fed. Cir. 1990); MPEP §2131 (8th ed.). The corollary of this rule is that the absence from a cited §102 reference of *any* claimed element negates the anticipation. *Kloster Speedsteel AB, et al. v. Crucible Inc.*, 793 F.2d 1565, 230 USPQ 81 (Fed. Cir. 1986). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1126, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Independent claims 17, 25, 31 and 36 recite by activation of said actuators oscillations are produced, which **are in antiphase** to the oscillations produced by turbulence in the fluid, and whose frequency and amplitude are at least approximately the same. Baz and Calabro' provide **no teachings** to phases, and therefore, it is inconceivable that Baz and Calabro', singularly or in any combination, teach or suggest oscillations are produced, which **are in antiphase**

to the oscillations produced by turbulence in the fluid as positively recited in claims 17, 25, 31 and 36. Pursuant to the above authority, since *each and every element* of the claimed invention is not disclosed by Baz or Calabro', the claims are not anticipated by Baz and Calabro'.

Regarding the reference to Pla, independent claims 17, 25, 31 and 36 recite by activation of said actuators oscillations are produced, which are in antiphase to the oscillations produced by turbulence in the fluid, and **whose frequency** and amplitude are at least approximately the same. Pla provides **no teachings** to frequencies, and therefore, it is inconceivable that Pla teaches or suggests **whose frequency** and amplitude are at least approximately the same as positively recited in claims 17, 25, 31 and 36. Pursuant to the above authority, since *each and every element* of the claimed invention is not disclosed by Pla, the claims are not anticipated by Pla.

Consequently, independent claims 17, 25, 31 and 36 are not anticipated by Baz, Calabro' and Pla, and therefore, claims 17, 25, 31 and 36 are allowable.

Moreover, claims 17, 25, 31 and 36 recite the actuators are piezoelectric elements **in the form of thin plates, films or layers**. That is, the actuators are thin plates, films or layers. Pla teaches an active mount 18 shown in Fig. 3 and described as including a first support member 34 attached to a second support 36 by two rubber pieces 38 and 40 which provide support and dampening and further includes a piezoelectric ceramic member 42 (col. 2, lines 60-65). Calabro'

teaches actuating means 24 actuate the corrugate membrane 21 forcing its vibration which generates pressure waves, indicated by reference number 40 in Fig. 1. In no fair or reasonable interpretation do Pla and Calabro' teach or suggest actuators in the **form of thin plates, films or layers** as positively recited in independent claims 17, 25, 31 and 36. For this additional reason, claims 17, 25, 31 and 36 are not anticipated by Pla and Calabro'.

The dependent claims of respective independent claims 17, 25, 31 and 36 are allowable for the reasons discussed above with respect to the independent claims, as well as for their own recited features which are not shown or taught by the art of record.

Claim 39 recites an **actuator** comprising a piezoelectric element secured to and **directly contacting the structure**. Baz teaches an actively-controlled constrained layer damping (ACLD) device or treatment consists of a three-layer composite attached to a surface 20 subject to vibration. Baz further teaches the sensing capability is provided by the piezo-electric layer 40 which is directly bonded to the vibrating surface 20 wherein the actuator or control capability is generated by the other piezo-electric layer 50 wherein the **piezo-electric layer (actuator) 50 is spaced from the vibrating structure** 20 (col. 6, lns. 15-35; Fig. 3). Pla teaches an active mount 18 (actuator) shown in Fig. 3 and described as including a first support member 34 attached to a second support 36 by two rubber pieces 38 and 40 which provide support and dampening and further

includes a piezoelectric ceramic member 42 is wherein the **piezoelectric ceramic member 42 is spaced from transformer core** 14 and tank 50 (col. 2, lines 60-65; Figs. 1-2). Calabro' teaches actuating means 24 realized by piezoelectric stack elements 25 provided in a main body 20 of cell 5 wherein cell 5 is secured to a sealed container, that is, **piezoelectric stack elements 25 are spaced from the sealed container**. Accordingly, in no fair or reasonable interpretation does Pla, Calabro' and Baz, singularly or in any combination, teach or suggest an **actuator** comprising a piezoelectric element secured to and **directly contacting the structure** as positively recited in claim 39. Since the art of record fails to teach or suggest a positively recited limitation of claim 39, such claim is allowable.

Claims 40-49 depend from independent claims 39, and therefore, are allowable for the reasons discussed above with respect to the independent claim, as well as for their own recited features which are not shown or taught by the art of record.

Further, Applicant herewith submits a duplicate copy of the Information Disclosure Statement and Form PTO-1449 filed together with this application on February 12, 2002. No initialed copy of the PTO-1449 has been received back from the Examiner. To the extent that the submitted references listed on the Form PTO-1449 have not already been considered, and the Form PTO-1449 has not been initialed with a copy being returned to Applicant, such examination and

initialing are requested at this time, as well as return of a copy of the initialed Form PTO-1449 to the undersigned.

This application is now believed to be in immediate condition for allowance, and action to that end is respectfully requested. If the Examiner's next anticipated action is to be anything other than a Notice of Allowance, the undersigned respectfully requests a telephone interview prior to issuance of any such subsequent action.

Respectfully submitted,

Dated: 4-2-04 By: _____

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